

Solar Photovoltaic Project Proposal to the Town of Amherst



Presented by



April, 2011





Our goal is to be a long-term partner with the Town to make Amherst a leader in the adoption of solar energy in the Commonwealth and thereby lower electricity bills for the Town and its businesses and homeowners, create jobs for Amherst's residents and reduce the Town's carbon emissions.

BlueWave and Smart Energy Capital

- Optimal partner for the Town of Amherst
 - **BlueWave Capital**: Local project developer who is a leader in brownfield and landfill reuse and redevelopment with current solar projects under development in Massachusetts in excess of 30MW
 - **Smart Energy Capital**: Financing provider who maintains a \$180 million strategic financing program in partnership with two large energy companies (**Duke Energy** and **Integrus Energy**) to provide 100% of the capital for commercial scale solar PV projects throughout the United States
 - Duke and Integrus serve as the long-term owners/operators of the solar projects under Smart Energy Capital's financing program; collectively, they own and operate thousands of MWs of power plants
- Attractive economics for the Town of Amherst
 - Over \$30 million in savings/revenues over the life of the contract
 - \$0 capital investment required from the Town of Amherst
 - Certainty of execution

About BlueWave Capital

- BlueWave is a company focused on distributed scale solar photovoltaic project development for communities in the greater New England region
 - Our team is focused on SREC supported net-metered and feed-in-tariff market regimes that allow for material long term energy savings for our partners
 - Firm is a leader in brownfield and landfill reuse and redevelopment
 - Proven track record in renewable energy
 - Extensive experience in the environmental permitting of complex development projects for renewable energy and economic development
 - Current projects under development exceed 30MW in Massachusetts
 - Short-listed by site hosts to develop over 20MW in New England
 - Project pipeline in excess of 50MW across the Northeast US and Canada
 - Strong strategic relationships throughout the solar value chain

BlueWave Capital Strengths

- Knowledge and Know How
 - Deep involvement in and understanding of Green Communities Act and related rules and regulations
 - Extensive municipal project experience, strong local commitment
 - Proven track record of securing state and federal environmental approvals
 - 25+ years of service in the NE region on environmental and energy matters
- Deep expertise
 - Renewable energy development
 - BlueWave has been awarded over 30MW of Municipal solar contracts in Massachusetts (New Bedford, Taunton, Athol)
 - Brownfields/landfill development
 - Project management, permitting, regulatory strategy
 - Environmental permitting
 - Project financing

Project Investor:



- Smart Energy Capital maintains a \$180 million strategic partnership with Duke Energy (NYSE: DUK) and Integrys Energy (NYSE: TEG) to provide 100% of the capital to build, own and operate commercial scale solar projects throughout the United States
- Under the program, Duke and Integrys jointly own, operate and maintain the projects and sell the solar energy to commercial, government and utility customers under long-term power purchase agreements
- Smart Energy's strategic funding program provides multiple benefits to clients including:
 - Comprehensive capital solution – provides 100% of the capital to build and own the projects, including the ability to fully monetize all available Federal tax benefits and maximize value of state and local incentives (e.g. SRECs)
 - Competitive cost of capital
 - Projects are operated and maintained by two large energy companies (as opposed to private equity, hedge fund or other financial investors)
 - Certainty of execution

Engineering Team:



- Tighe & Bond

- Deep knowledge of Amherst facility
- Extensive environmental permitting experience
 - EEA, DEP, NHP
- Strong landfill monitoring and maintenance capabilities
- Substantial WMECO experience

TRC Solutions

- Full service solar engineering capability
 - Site identification and assessment
 - System design and engineering
 - Permitting
 - Interconnection
 - EPC & Commissioning
- Permitted only solar facility sited on a solid waste landfill in Massachusetts
 - 2MW solar PV facility in Greenfield
- Representative Clients
 - Con Edison Solutions, Alteris Renewables, enXco, Long Island Power Authority, Axio Power

EPC Team:



BOSCH

- Large European solar photovoltaic module manufacturer
 - Global footprint and long term commitment to industry
 - Top quality products and service
 - Over 2,700 employees worldwide
- Unique experience in solar industry
 - 500MW of installed manufacturing capacity
 - Experience in ground-mounted, rooftop, BIPV, and other types of PV installations worldwide
- Industry recognition
 - Bosch AG is one of the world's oldest (125 years) and best regarded diversified industrial groups in the world

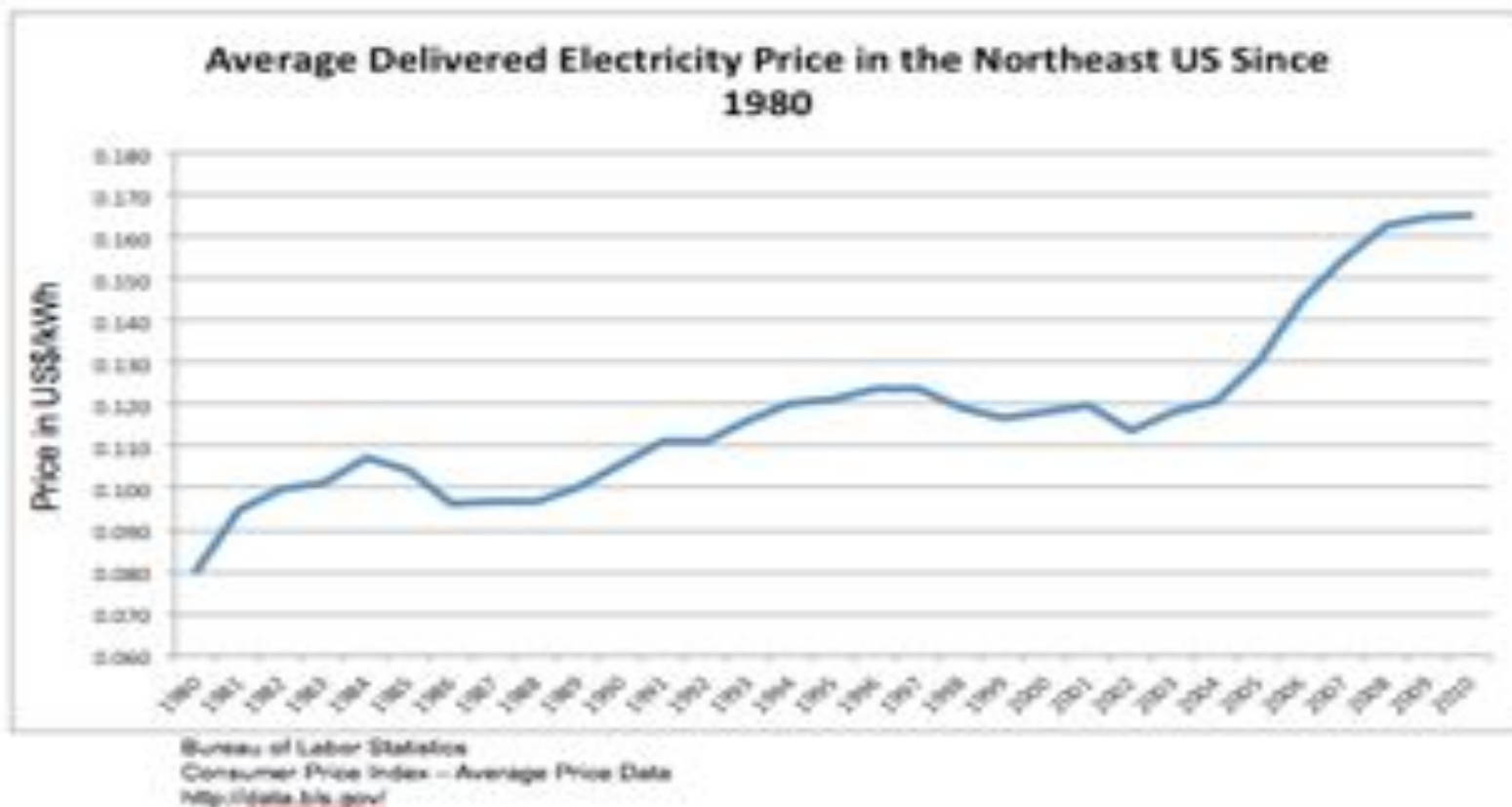


Benefits for Town of Amherst

- Financial
 - Substantial long-term cost savings – Over \$30M over the life of the contract
 - Substantial property tax payments - \$5M over the life of the contract
 - Electricity price stability and predictability
 - Rapid deployment and cost synergies
- Environmental & Social
 - Reduce the Town's CO2 emissions by nearly 100,000 tons over the productive life of the photovoltaic system
 - Equivalent to removing over 15,000 cars from the road and planting nearly 160,000 trees
 - Financing flexibility and system ownership option
 - Third party-financed commercial/institutional opportunity
 - “Zero Down Solar” offer for homeowners within the Town of Amherst

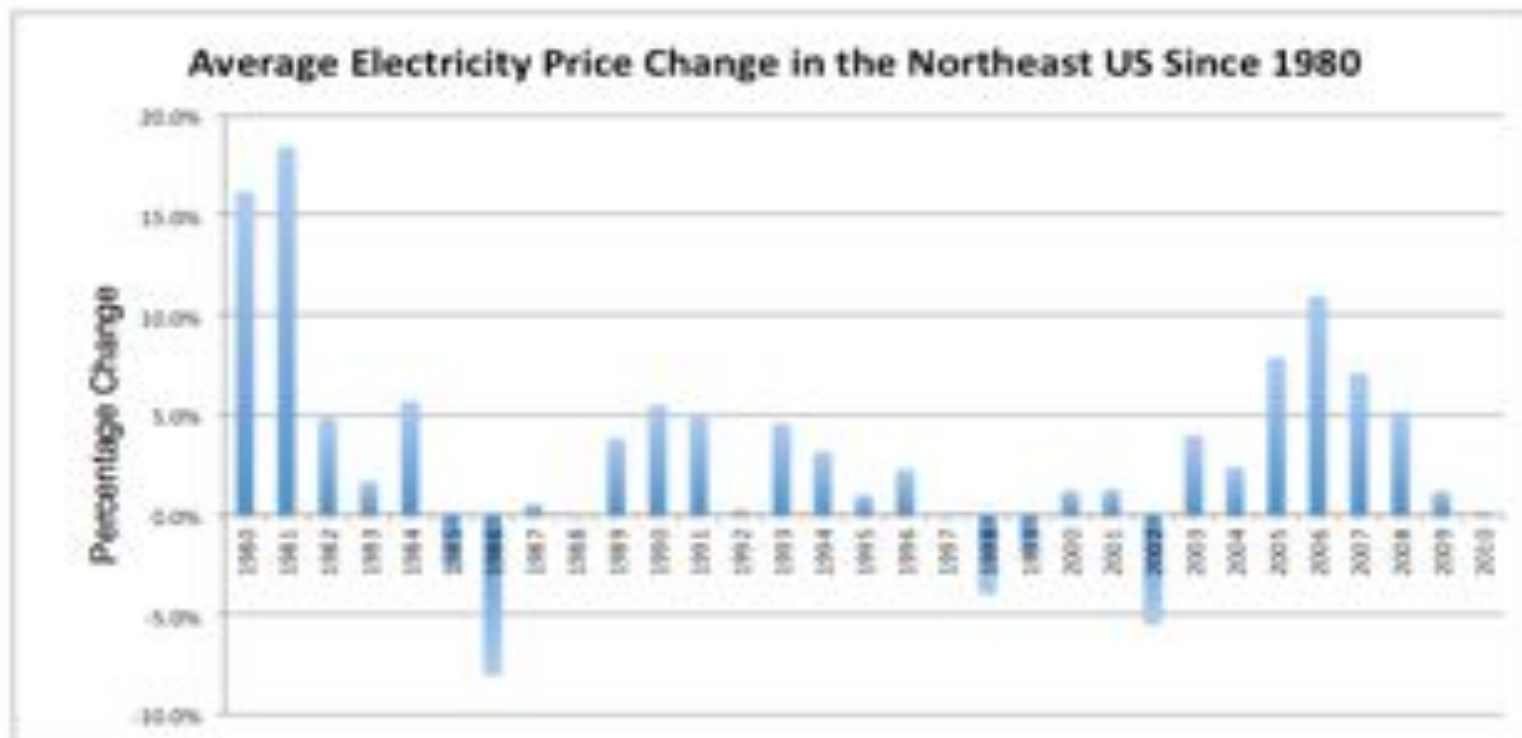
Benefits for Town of Amherst

- Rate proposed by BlueWave Capital is lower than delivered power prices in the Northeast during most of the last 30 years



Benefits for Town of Amherst

- Electricity prices have risen 3 out every 4 years since 1980, BlueWave's proposal offers significant price protection and certainty.



Bureau of Labor Statistics
Consumer Price Index - Average Price Data
<http://data.bls.gov/>

Regulation/Incentives Are Now Aligned

- MA Renewable Portfolio Standard
 - 6% of electricity sales by 2011
 - 15% of electricity sales by 2019
 - 400MW Solar Carve-Out (1% of electric load)
- Financial Incentives, Grants
 - Production Based Incentives (SRECs, RECs)
 - Federal Investment Tax Credit/ 1603 Grant
 - New Market Tax Credits
 - State Investment Tax Credit
 - Accelerated depreciation
 - Grants and low interest loans
 - USDA REAP Initiative
 - USDA Loan Guarantees
 - DOE FIPP Loan Guarantees



Project Approach

- Phase 1
 - Negotiate Power Purchase Agreement
 - Complete due diligence on site proposed in RFP
 - Design, engineer and construct by YE 2011
- Phase 2
 - Collaborate with Town departments to identify additional host sites (Utility bill analysis, GIS tracking, community outreach)
 - Outreach to community businesses, institutions, and homeowners
 - Site identification and feasibility analysis
 - Project bundling/Power Purchase Agreement
 - Design, engineer, construct 1-2 MW by YE 2012

Project Timeline

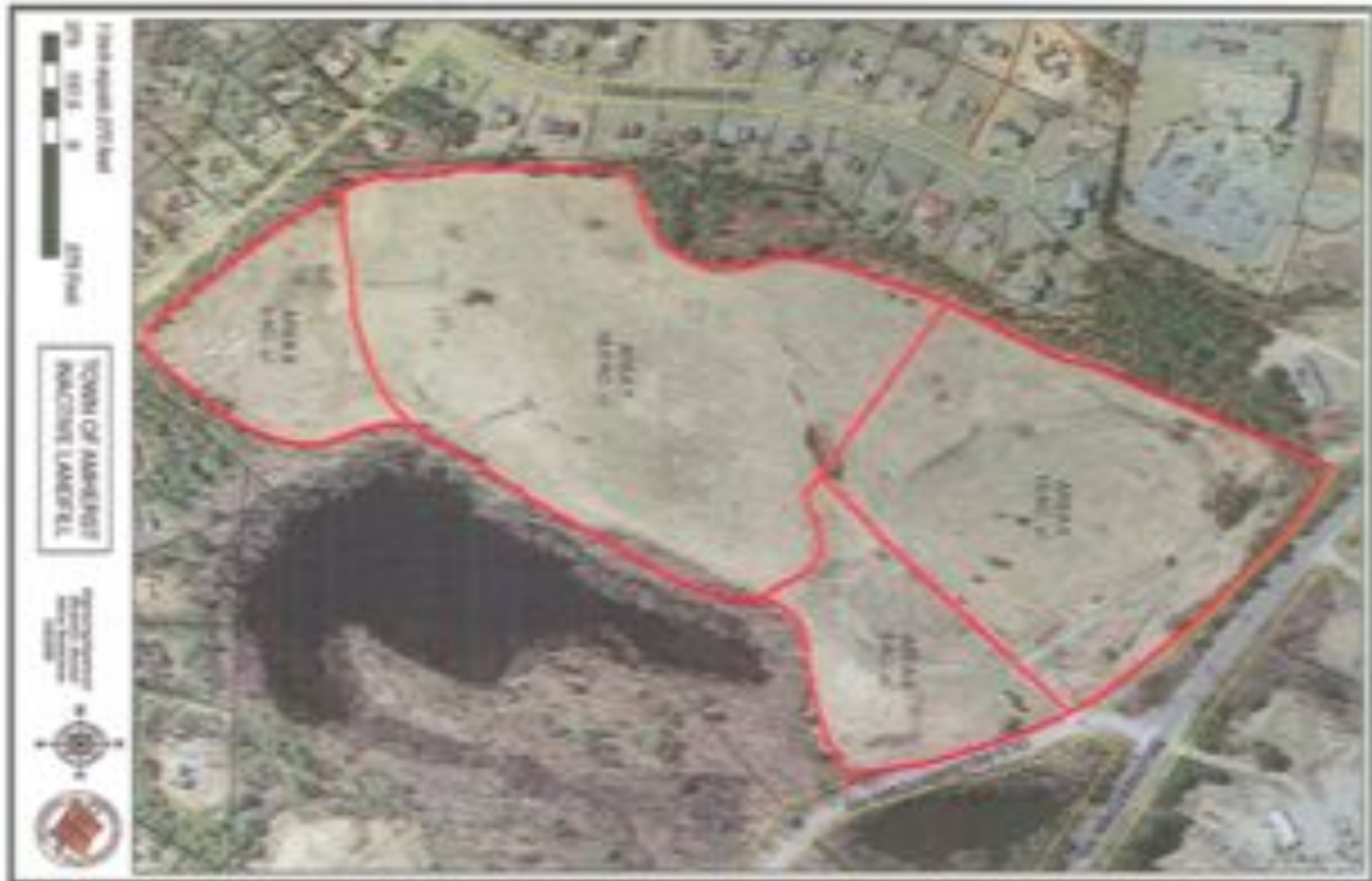
Table 1: Construction Schedule

Project Milestone	Completion Date
RFP Response Submittal	12/2010
PPA Executed	5/2011
Interconnection Application Filed	5/2011
Permit Applications Filed	7/2011
Local Permits Awarded	10/2011
Interconnection Agreement Signed	10/2011
Financial Closing	10/2011
Construction Starts	10/2001
Construction Completed	4/2012
Project Commissioning	5/2012

Phase 1: 4.75MW Old Landfill Site

- Capped landfill on Belchertown Road supports ~4.75MW of solar photovoltaic facility without modifications to site
 - Most of the site is flat with an uninterrupted southern view and well suited for PV development
 - Proposal contemplates the use of areas 5 & 7 of the Old Landfill while leaving Areas 6 & 8 unused
 - Proposed facility can be easily modified and reduced to ~3.75MW to avoid use of area 5 and preserve it for Town use
 - Site is in close proximity to three-phase power lines
- The proposed system will generate approximately 6,00,000 kWh per year

Phase 1: Landfill Site Overview



Phase 1: 4.75 MW Proposed Facility



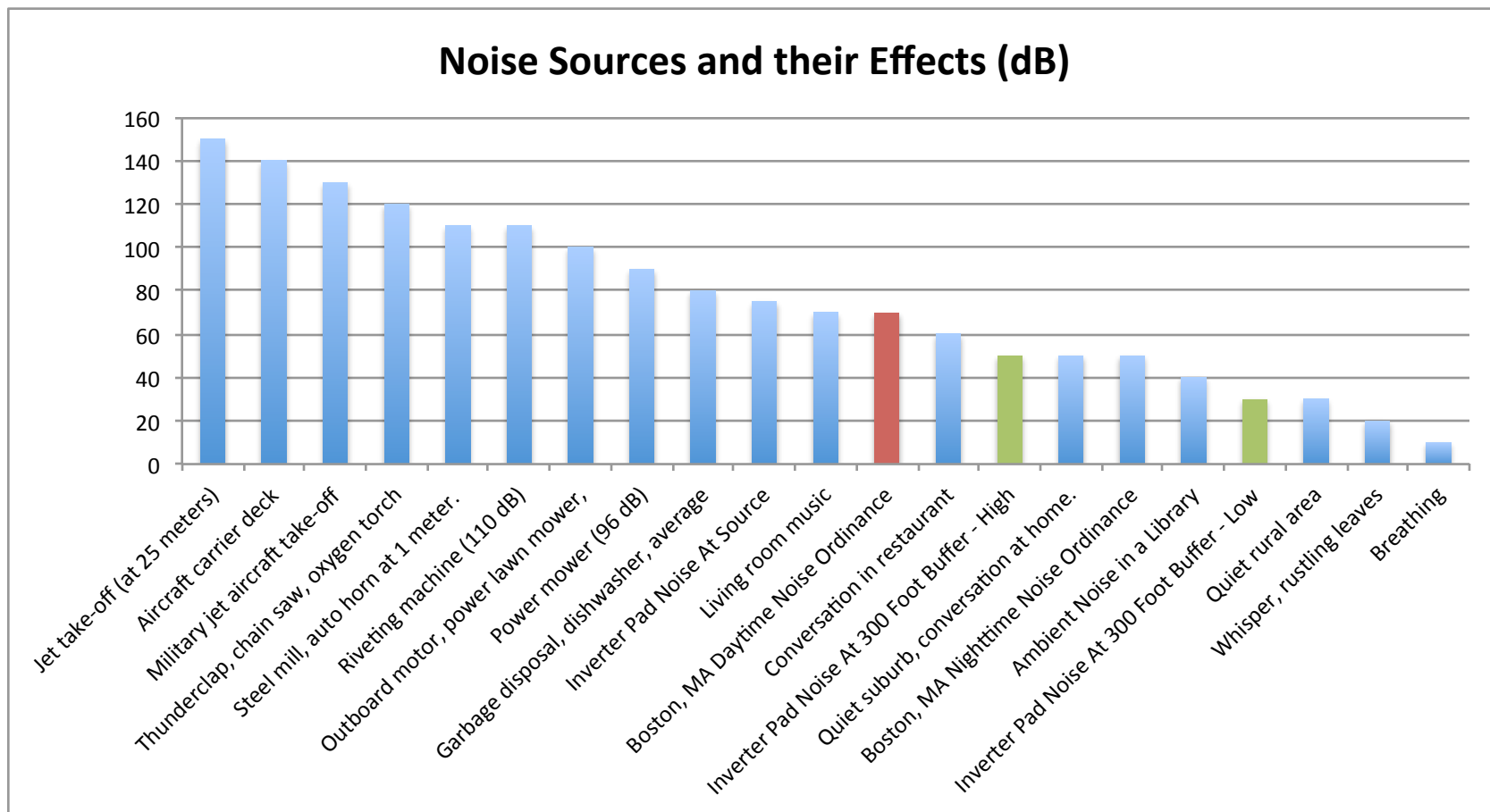
Operations & Maintenance Plan

- Careful system component selection
- Equipment warranties and inverter service agreements maintained
- Monitoring and data systems
- Quarterly performance reporting
- Local on-call resources for emergency/service/remedial requests
- Routine site/component maintenance (string and switching tests, infrared scans, cleaning, filter replacement, panel washing)
- Annual mechanical inspection

Operations & Maintenance Plan (Cont.)

- The following yearly O&M services will be provided for each site:
 - Visual and mechanical inspection of general site conditions of solar energy system, PV arrays, electrical equipment, mounting structure, data acquisition system, and balance of system provided under agreement
 - Cleaning of inverter cabinet air vents, PV module, and junction/combiner boxes, and changing inverter air filters (per manufacturer warranty requirements)
 - Cleaning and removing dust from inverter heat sinks (per manufacturer warranty requirements)
 - Mowing or other proactive maintenance of site

Solar on Landfills – Noise Considerations



Landfill Solar Installation Examples

